BENGALURU SOLID WASTE MANAGEMENT LIMITED

EXPRESSION OF INTEREST

FROM

Reputed dealers / manufactures / Suppliers / Individuals

FOR

"Rates for Video wall, UPS, Command Center Monitoring Software & DG Set for Integrated command and control Center at Ground Floor, BSWML premises"

BENGALURU SOLID WASTE MANAGEMENT LIMITED

Office of the Deputy General Manager-2,BSWML, 1st Floor, BBMP Building, Thimmaiah Road, Vasanth Nagar, Bengaluru – 560 052. Email: bswmlee4@gmail.com

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No: DGM-2/BSWML/EOI/ 01/2025-26 Date: 05.04.2025

EXPRESSION OF INTEREST (EoI)

(Through **GOK KPP Portal** only)

1. The Deputy General Manager-2, BSWML invites EOI on behalf of the Managing Director, BSWML, Bengaluru from the reputed dealers / manufactures / Suppliers / Individuals for quoting of rates for the following items as indicated in table below
2. Bid documents may be downloaded from the KPP portal of the Government of Karnataka.
3. EOI must be submitted online through KPP portal on or before 16.00 hours on 17.04.2025
4. Other details can be seen in the tender documents.

Sl. No.	Description	Unit	Quantity
1	Videowall	No's	As per Annexure -A
2	UPS	No's	As per Annexure -B
3	Command Center Monitoring Software	No's	As per Annexure -C
4	DG Set	No's	As per Annexure -D

NOTE:

1. Bid will be opened on the website https://kppp.karnataka.gov.in in the office of the **Deputy General Manager-2 BSWML** on 19.04.2025.at 11.30 hours.

2. Aspiring Bidders/Contractors who have not registered in KPPP should register before participating through the website https://kppp.karnataka.gov.in
3. Before submission of online bids, bidders must ensure that scanned copies of all the necessary documents have been attached with bid.
4. All the required information required for Bids must be filled and submit online.
5. The detailed specification of the above items is mentioned in the Annexures.
6. The Bengaluru Solid Waste Management Limited, Bengaluru reserves the right to accept /
   Reject tenders without assigning any reasons.
7. Corrigendum's / modifications / corrections, if any, will be published in the KPP Portal only.
8. Further details of the work can be obtained in the office of **Deputy General Manager-2 BSWML, Bengaluru – 560052** on all working days between 10:30 hours to 17:30 hours.
9. GOK KPP portal http://KPPP.karnataka.gov.in for registration details contact KPPP Helpdesk at 080- 22371090/22340060/22340948.

Sd/-

Deputy General Manager-2
BSWML

Copy submitted to:

1) Hon'ble Chairman (BSWML) for Kind Information.
2) Hon'ble Managing Director (BSWML) for Kind Information.
3) Chief Executive officer (BSWML) for Kind Information.
4) Chief Engineer & Chief General Manager (BSWML) for Kind Information.
5) Assistant General Manager (KR Puram-Division/Incharge of Subbarayanapalya Plant) BSWML for necessary action.
6) Assistant Engineer/Assistant Manager BSWML for necessary action.
7) Office Copy.

Deputy General Manager-2
BSWML

GENERAL TERMS AND CONDITIONS

1 The intending tenderers shall have valid registered firm to carry out such business in respective trade and must be a manufacture/dealer/supplier/Individuals.
2 The supplier shall submit the attested copies of Registration Certificates/ License.
3 The supplier shall submit supporting documents for desired standards as said in specifications.
4 Incomplete / Conditional EoI's will be rejected and rates of the supplier who satisfies the above condition will only be considered.
5 The supplier shall submit the detailed Company Information.
6 The validity of the EoI is 90 days from the date of receipt of the same. If required for further period the same has to be extended by them on request from this office.
7 The tenderer shall have valid statutory registration with a Government viz GST, IT, & PAN.
8 Further, particulars can be obtained from the office of the DGM-2, BSWML, 1ST Floor, BBMP Building, Thimmaiah Road, Millers Tank Bund Area, Vasantha Nagar, Bengaluru-560051, during the working days between 10.00 am to 4.00 pm.
9 The Supplier/Dealer/Bidder should submit the bid as per Schedule-B.
10 **This EOI is invited *only* to get the competitive rates for the items.**
11 The BSWML reserves right to accept or reject any or all tenders without assigning any reasons.
12 The agency should quote rates Excluding GST

Calendar of events:

- Last Date for Receipt of Quotation is 17.04.2025 upto 16.00 hrs

  Date of Opening of 19.04.2025 by 11.30 hrs

Annexure - 1

Expression of Interest ***"Rates for Videowall, UPS ,Command Center Monitoring Software &DG"*** **Details of the Company/** Agency/ Agencies		
1.	Name of the Company/ Agency/ Agencies	
2.	Address of the Company/ Agency/ Agencies	
3.	Status of the Company	Public Ltd / Pvt. Ltd / Others
4.	Details of Incorporation of the Company [Attach copy of Incorporation certificate]	Date: Ref. #
5.	Details of Commencement of Business	Date: Ref. #
6.	Valid GST registration no. [Attach certificate]	
7.	Permanent Account Number (PAN) [Attach certificate]	
8.	Name & Designation of the contact person to whom all references shall be made.	
9.	Telephone No. (with STD Code) Mobile No.	
10	E-Mail of the contact person:	
11.	Fax No. (with STD Code)	

Annexure - 2

FORMAT FOR PERFORMANCE STATEMENT

Orders placed by (Full address of Purchaser)	Order No. and Date	Description and Quantity of ordered	Value of Order	Date of completion of delivery as per contract/actual	Remarks indicating reasons for late delivery if any.
1	2	3	4	5	6

Name of the Firm: .....

Seal &Signature: .....

Annexure - 3

Format for uploading Turnover information

Financial year	Turnover (Rs. in Lakhs)
2021-22	
2022-23	
2023-24	

(Total turnover of the Agencies during the preceding 3 years)

Annexure – 4

Affidavit

[Use Rs. 100.00 Stamp Paper]

This is to certify that << COMPANY NAME/ is not blacklisted by the Government of Karnataka or any of its agencies/Central/any other State/UT Governments or their agencies for indulging in corrupt or fraudulent practices or for indulging in unfair trade practices or for any reasons whatsoever as on date.

Company Secretary /

Authorized Signatory Name

of Signatory:

Bidder Name:

Date:

Place:

Signature and seal of Notary

BENGALURU SOLID WASTE MANAGEMENT LIMITED

Name of the Work: *"Rates for Video wall, UPS ,Command Center Monitoring Software & DG Set for Integrated command and control Center at Ground Floor, BSWML premises"*

Quotation Notification No: DGM-2/BSWML/EOI/01/2025-26 dt: 05.04.2025

Annexure – A

Sl. No.	Video Wall Specifications	
1	Display wall Screen Size	70 inch (diagonally) with laser Light Source complete configuration with covered base
2	Configuration	7 columns x 2 rows
3	Projection Technology	LASER DLP based Rear Projection, individual cubes should be equipped with one laser bank and the laser bank should have an array of diodes. Single or multiple diode failure should not impact image display on screen. Multiple Laser bank are not acceptable due to the possibility of convergence issue.
4	Total resolution of Video wall	Minimum wall native resolution of video wall should be 112 Mega pixel
5	Screen to screen gap	< 0.02mm
6	Brightness of engine	Min 2200 Lumens
7	Brightness Uniformity	Minimum 95%
8	Dust Prevention	Should be IP6X certified. Test certificate shuld be submitted as proof along with technical bid submission.
9	Light Source Lifetime	Normal mode: 60,000 hours: Eco mode: 80,000 Hours
10	Remote	IR remove control should also be provided for quick access
11	Inputs	1 No. of Display Port, 1 x DVI and 1 x HDMI each
12	Screen Support	Screen should be minimum 3 layers with a Hard Backing to prevent bulging with the rear layer of glass.
13	Heat Dissipation	Less than 1400 BTU/h- Normal mode

14	Power	Dual Redundant and Hot swappable power supply. This should be built inside the cube for fail safe operation with cooling features.
15	Eco mode	Less than 350 Watt
16	Cooling inside cube	Any advanced cooling mechanism and Cooling mechanism should not have any hazardous liquid.
17	Remote management through IP	Remote management through IP for parameter adjustment. Should be above to control and monitor individual cubes, multiple cubes.
18	Access	Rear only
19	Pixel clock source redundancy	Min 450 MHZ or higher to ensure flicker less display
20	Cube depth	Cube depth – 550 + or - 5% mm
	Operating conditions	
	Temperature	10^0C – 30^0C
	Humidity	Up to 80% non- condensing

Video wall controller		
1	Display controller	Controller should be able to control 14 video wall cubes
2	Architecture	The controller should be based on the latest architecture
3	Platform	Window 10
4	SSD	480 GB or higher
5	RAM	16 GB
6	Chassis type	19” Rack mount industrial chassis
7	Network	2 Network port
8	Resolution support for outputs	Controller should support 112 megapixels video wall resolution
9	Inputs	20 inputs
10	Key board and mouse extension	Keyboard and mouse along with mechanism to extend them to 20 Mtrs. operator desk from display controller to be provided.
11	Redundancy	Redundant hot swappable SSD in RAID configuration. Redundant hot swappable power supply also to be provided.
12	Others	The video wall and the controller should be of the same make to ensure better performance and compatibility.
13	OEM certification	All features and functionality should be certified by the OEM. The display modules, display controller and software should be form a single OEM.

Wall management software:		
1	**Specification item**	**Detailed specification description**
2	Scaling and display	Software to enable the user to display multiple sources in any size and anywhere on the display wall.
3	Auto source detection	Software should support auto source detection
4	Layout management	Should support for video, RGB, DVI, Internet explorer, Desktop application and remote desktop monitoring layouts.
5	Scenarios	Software should be able to save and load desktop layouts from local or remote machines.
6	Layout scheduler	All the layouts can be scheduled as per user convince.
7	Scenarios	Software should support auto launch of layouts according to specified time or event by user.
8	Lauch application	Software should be able to support
9	Integration with 3rd party devices	The system should offer an interface to enable control from 3rd party devices like Creston, AMX etc.
10	Live playback	Software should be able to provide live playback of videowall.
11	Workspace allocation	System should provide functionality to the administrator to define and allocate workspace for a particular operator or a group of operators when working on a video wall.
12	Authentication	Software should offer 4 levels of authentication (User accounts, Permission for functionality & Roles etc.)
13	Offline Layouts	It should be possible to create offline layouts
14	User friendly	Software should be user friendly
15	Ticker Type	Software should be able to prepare various kinds of tickers: text ticker,transparent and time ticker
16	Protection	The system should have a Hardware/software License key to protect the software from unauthorizes access
17	Source Carousel	User can set multiple source that can change sequence after some time interval without changing the layout
18	Region management	Admin can assign video wall workspace to user based on pixel map
19	Snap sensitivity	Enables the magnetic behavior to fit the

		sources automatically for easy alignment on the wall
20	Scalable GUI	Scalable GUI to scale to any size of Video wall screen
21	Scheduler	User can schedule the layout on specific date & time, week day, weekend ,start & end date
22	Source positioning	User can position the source input on Video wall with single click

PRE-QUALIFICATION

• OEM of the offered DLP indoor video wall screen should have experience of supplying and installing minimum of 100 DLP Video walls at any command-and-control centre of Government/PSU/Semi-Government/Government undertaking or similar institution during the last 5 years. This supply could be either directly or through a partner or system integrator.

• OEM of the offered video wall screen should be present in India with a registered office for minimum ten years from the date of the bid.

• OEM shall be ISO 9001, ISO 14001, OHSAS 45001 & ISO 27001:1 certified. Certificates to be submitted.

• OEM shall not have been blacklisted by any State / Central Government Department or Central /State PSUs. OEM Declaration to be submitted along with the technical bid .

• Offered brands should not be from countries sharing land border with India. OEM Should Declare Country of Origin of Quoted Products. Evaluation Committee can check components at any time.

• Quoted/Offered product model should be available on OEMs web site. Link of offered model –OEM website to submitted along with the technical bid.

• OEM should have its own service center in Bangalore managed by their own engineers.

• Valid BIS certificate to be provided for the products offered.

Annexure – B

Technical Specifications of UPS

Power Rating	120kVA/120kW

Input	Nominal Voltage	220/380 Vac; 230/400 Vac; 240/415 Vac
	Voltage Range	332 ~ 477 Vac (full load); 228 ~ 332Vac (63% ~100% load)
	Frequency	50/60 Hz
	Frequency Range	40~70 Hz
	Current Harmonic Distortion	< 3%
	Power Factor	> 0.99 (full load)
Output	Nominal Voltage	220/380 Vac; 230/400 Vac; 240/415 Vac
	Power Factor	1
	Voltage Regulation	± 1%
	Voltage Harmonic Distortion	< 2% (linear load)
	Overload Capability	≤ 105%: continuous; 106% ~ ≤ 125%: 10 minutes; 126% ~ ≤ 150%: 1 minute; > 150%: 1 second
	Output Frequency	50/60 Hz ± 0.05 Hz
	Cress Factor	3:1
	Short-circuit Current (RMS)	470A, 90 ms
Efficiency	Online Mode	up to 96%
	ECO Mode	up to 99%
Battery	Type	SMF/ VRLA 12V
	Voltage	±240 Vdc (default)
	Charge Voltage	Float charge: 272±2 Vdc; Boost charge: 280±2 Vdc
	Total VAH Required	Minimum VAH -109440 to Provide 30Mins Backup

Audible Noise		< 65 dBA
LED & LCD		LED indicators and multi-language LCD display
Communication Interfaces		SMART slot × 1, MINI slot × 1, Parallel port × 2, RS-232 port × 1, USB port × 1, REPO port × 1, Charger detection port × 1, Input dry contact × 2, Output dry contact × 6, External battery temperature port × 2
Manual Bypass Breaker		Yes
Compliance	IEC Pollution Degree (PD)	PD 2
	Over Voltage Category (OVC)	OVC III
	Type of System Earthing	TN-S, TN-C, TN-C-S

Environment	Operating Altitude	1000 meters (without derating)
	Operating Temperature	0 ~ 40°C
	Ambient Storage Temperature	-20 ~ 50°C
	Relative Humidity	5% ~ 95% (non-condensing)
	Ingress Protection (IP) Class	IP20
Physical	Dimensions (W x D x H)	520×800×1760 mm
	Weight	Vendor/OEM To specify

Certifications	
Manufacturer	**QMS:** As per ISO 9001: 2008 & TL9000 **EMS:** As per ISO 14001: 2004 **OSHAS:** As per ISO 45001: 2018
Product Safety Certifications (Mandatory)	**ESD: IEC61000-4-2: level4 RS: IEC61000-4-3: level3 EFT: IEC61000-4-4: level4 SURGE: IEC61000-4-5:level4 CS: IEC61000-4-6: level3** **IEC 61000-2-2** **EN 62040-2** **EN 61000-3-2**
NABL approved Lab at manufacturing Facility of OEM in India	**Should be Available & document to be submitted**

Annexure – C

Command center monitoring software

Sl.No	Specifications/Parameters	Compliance (Yes/No)

1	The Integrated Command & Control Center Platform (ICCC) shall be an enterprise class IP-enabled application. The ICCC user interface (UI) applications shall present a unified security interface for the management, configuration, monitoring, co - relation, intelligence and reporting of various embedded systems and associated edge devices.	
2	The ICCC shall support the seamless unification of various Public Safety elements IP Video Management System (VMS), AI Based Video Analytics, Automatic Number Plate Recognition (ANPR) System, Visitor Management System, Access Control System, Variable Messaging Display (VMD), Vehicle Tracking System (VTS),Incident management, Emergency response system, under a single platform.	
3	The ICCC user interface (UI) applications shall present a unified security interface for the monitoring, co - relation, intelligence and reporting of various Embedded Systems, Sub-Systems and associated edge devices.	
4	The platform must have native failover with no dependency on external virtualized or clustered applications. Solutions with external clustering like Windows Clustering, Microsoft SQL Clustering and VMware or Hyper-V etc. should not be proposed.	
5	The ICCC platform must be a true unified management experience for critical infrastructure Monitoring, simplifying control room operation and system integration, minimizing total cost of ownership, and increasing operational efficiency critical to rapid decision-making.	
6	The Command & Control solution should be implemented and complied to the industry open standards based Commercial-of-the-shelf (COTS) products.	
7	Platform shall be open architecture based, Highly Scalable and able to integrate multiple disparate Video Surveillance systems seamlessly on a common platform.	
8	Platform system shall provide a real time Common Operating Picture (COP) of all areas involving all agencies using a simple GUI.	
9	System should provide tool to define/create any event/rule based Standard Operating Procedure (SOP) for decision making by optimizing the time to resolution for emergency and crisis situations.	
10	Platform shall provide a dashboard functionality to manage workflows by integrating information from different agencies	

	and systems to facilitate responsive decision making.	
11	The Integrated Command & Control Center Application Platform shall have a built-in ONVIF Device Discovery Tool, so that ONVIF Cameras can Directly be added to the ICCC Application Platform.	
12	The CCC shall embody the following characteristics:	
i.	Client-server Architecture	
ii.	Support Multi-Site, Multiple-Hierarchy Deployment	
iii.	Provide clear scalability	
iv.	Central administration capability	
v.	Support local redundancy and high availability options	
vi.	Capable of running in a virtual environment	
vii.	Provide a mechanism to define key performance indicators, trends, leading indicators and visualize the indicators on a web based configurable dashboard infrastructure	
viii.	Display a configurable indication of overall situation threat level	
ix.	Provide communication capability to include email, mass notification, and application-based messages	
x.	Support the simulation of events, such as alarms, for training purposes.	
xi.	The System shall be Modular & Scalable & allows for customisation to meet precise need of customer’s unique requirement.	
xii.	The System shall render services of Video Surveillance, Central Alarm, connection services to 3rd party data bases, Consume or Source web services.	
xiii.	The System shall have Graphical User Interface & tools to create Workflows & Rule Engine.	
13	**Integration Features**	
	Centralized Integrated Command and Control Center (ICCC) and video/event monitoring of unlimited cameras, Perimeter control devices, third party security devices spread across multiple sites or places. Integration including but not limited to following external devices or applications: IP Cameras through VMS, AI Based Video Analytics, Automatic Number Plate Recognition (ANPR) System, Visitor Management System, Access Control System, Variable Messaging Display (VMD), Vehicle Tracking System (VTS)	
14	Supports protocols integration with SCADA, Modbus, BACnet, SIP, OPC, I/O inputs and Relay outputs, SDK integration in all programming languages, Database integration, Third party Application integration. Integration may also be required to be done and as per customer requirement.	

15	Integrated Command and Control Center (ICCC) Application, Video Management Software (VMS), AI Based Video Analytics Software should be from same make for Seamless Integration between all different components.	
16	All the alarms should be shown in same system. The systems should have ability to integrate with devices by either sending events from or receiving events from other devices. Event SDK support required. Events from Video System should be able integrate with third party applications and devices.	
17	Integrated Command, Control, and Information Management System (ICCC) for handling all security operations-related tasks and improve work efficiency	
18	The ICCC system shall be able to integrate, connect, and correlate information from security data and information from the following security subsystems using Ethernet-based connectivity:	
	o o New Proposed Video Management Software (VMS)	
	o o AI Based Video Analytics	
	o o Automatic Number Plate Recognition (ANPR)	
	o o Visitor Management System	
	o o Vehicle Tracking System (VTS)	
19	The ICCC system shall be able to integrate, connect, and correlate information from security data and information from the following security subsystems using Ethernet-based connectivity.	
20	The ICCC system shall enable the operator to quickly visualize the environment and assess alarm by reviewing related security information.	
21	**Graphical User Interface (GUI) Display Functions**	
i	View and handle multiple alarms at one time.	
ii	View multiple video windows at one time. Operators shall be able to resize and move video windows.	
iii	View windows in a single monitor, across multiple monitors or video walls.	
iv	Access, display and manage events / alarms and related security data and information from subsystem based on priority and authority level.	

v	Enable different graphical user interface “panes” to be modified to provide a customized operator experience.	
22	**GIS Maps**	
i	Multiple map integration including OSM, Custom Maps, Google and Bing. Ability to add maps defined or given by customer.	
ii	Each map should support multiple layers or hierarchy of Base Layer and Overlay layer. Execute Query on layers and export the results.	
iii	Should support Geo Server	
iv	Finding Shortest path/Best Route between 2 GPS location. Measure distance and area on a map.	
v	Supports Geo coding and reverse geo coding.	
vi	View and plot devices, cameras, vehicles, sensors and field personnel based on their GPS coordinates.	
vii	Devices, incidents, events and Status can be monitored and tracked on Maps	
viii	The GIS application shall enable real time information dissemination (Geo-Spatial and Non Geo-Spatial data)	
ix	The GIS application shall enable users to open up a new incident and directly associate it with a map location or to associate an already opened incident with a new map location.	
x	The system shall also be capable to receive an API call which will open up a new incident and automatically place it on the map using a map location passed via API / Web Services. The relevant map location shall be displayed on the map for as long as the incident is open.	
xi	Customized Dashboards based on widgets and user selected options	
xii	Allow incorporation of “live” map displays from on-line map sources	
xiii	Allow user to interactively drill down to specified security zones and sub-zones.	
xiv	Allow user to view sensor and related name from map console.	
xv	Allow resources and objects to be tracked on map with geo-referenced trail.	

xvi	Visually display an alarming sensor on map	
xvii	Visually differentiate sensor alarm severities on map through different colour and icon identifiers	
xviii	Immediately view alarm details (including description, video, etc.) and investigate the alarm from the map.	
xix	Allow user to choose camera from map to view live video.	
xx	Allow user to choose camera to play, pause, stop, slide forward or backward, and play recorded video from selected time.	
23	**Dashboard**	
i	Provide alarm summary of each monitoring zone or monitoring area in graphical chart format.	
ii	Open Alert Count by Monitoring Zone / Monitoring Area	
iii	Enable Monitoring Zone or Monitoring area default to Summary view dashboard or to a map when the zone or area is selected	
24	**SOPs (Standard Operating Procedures)**	
i	Ability to define SOPs (Standard Operating Procedures) to effectively handle a security situation.	
ii	Flowchart based creation of SOPs in the web interface.	
iii	Situation Management by defining appropriate actions, messages, and acknowledgement for alerts & events from various devices.	
iv	Define or customize rules(as per customer requirement) between different sensors and devices	
v	Actions and SOPs can be defined with logical if-then-else conditions.	
vi	Load text, documents, images or other files or forms as instructions	
vii	Options to Forward alarms to other users in the system.	
viii	Heat map of events to be shown on GIS map including nearest Field personnel calculations	
ix	Incident Management Alarm reports including device status connect and disconnect Status reports.	
x	Actions taken as part of SOP should be logged in audit trail with date time stamp and operator comments	

xi	Software/ application shall support on-demand or automatic outgoing call initiation.	
25	**Video Display Integration**	
i	Shall view live or recorded video from resizable and movable windows/Grid.	
ii	Should have an ability to perform video controls for video systems from workstation	
iii	Shall play, fast-forward, rewind, pause, and specify time to play recorded video	
iv	Shall take a video still image (snapshot) from live or recorded video	
v	Shall export video for user specified time and duration	
vi	Shall have the capability to move PTZ cameras	
vii	Shall view Video in Video Matrix.	
viii	Shall display in 1x1, 2x2, 3x3 and 4x4 window formats	
ix	Shall enable operator to specify video windows to be displayed in matrix/ Video Wall.	
x	Shall enable matrix settings to be saved per user	
xi	Shall be able to define view either live or recorded video or both Simultaneously can be displayed in the video matrix window.	
xii	Shall enable video snapshot to be taken and saved from any window pane in the matrix view	
xiii	Shall rotate through multiple video views based on predefined video camera sequence and duration.	
xiv	Shall enable the user to pause the rotation of video and resume the video rotation again	
xv	Shall enable times between new video to be adjusted	
xvi	Shall enable both live video and recorded video to be played Simultaneously.	
xvii	Shall enable alarms to be generated from any video pane	
xviii	Shall enable user to only view and control video for which they have been assigned permissions by the administrator	
xix	Shall manually create an alarm from the live or recorded video with specified severity and description	
26	**User Specific & Customizable Dashboard**	

i	Provide alarm summary of each monitoring zone or monitoring area or a Monitoring Site in graphical chart format.	
ii	Open Alert Count by Monitoring Zone / Monitoring Area	
iii	Enable Monitoring Zone or Monitoring area or Monitoring a Site default to Summary view dashboard or to a map when the zone or area is selected.	
iv	Collects major information from other integrated sensors/platforms.	
v	Multi-displays configurations	
vi	Use of, GIS tool which allows easy map editing for wide area monitoring (Google map, Bing map, OSM map, etc.).	
vii	Should provide tools to assemble personalized dashboard views of information pertinent to incidents, emergencies & operations of command center	
viii	Should provide historical reports, event data & activity log. The reports can be exported to pdf or html or any other format requested by the client.	
ix	Should provide dashboard filtering capabilities that enable end-users to dynamically filter the data in their dashboard based upon criteria, such as region, dates, product, brands, etc. and capability to drill down to the details	
27	**SOP's (Standard Operating Procedures)**	
i	Must have the Ability to define SOPs (Standard Operating Procedures) to effectively handle a security situation.	
ii	Command & Control Centre should provide for authoring and invoking un-limited number of configurable and customizable standard operating procedures through graphical, easy to use tooling interface.	
iii	Standard Operating Procedures should be established, approved sets of actions considered to be the best practices for responding to a situation or carrying out an operation.	
iv	The users should be able to edit the SOP, including adding, editing, or deleting the activities.	
v	There should be provision for automatically logging the actions, changes, and commentary for the SOP and its activities, so that an electronic record is available for after-action review.	
vi	The SOP Tool should have capability to define the following activity types:	

vii	Manual Activity - An activity that is done manually by the owner and provide details in the description field.	
viii	Automation Activity - An activity that initiates and tracks a particular work order and select a predefined work order from the list.	
ix	If-Then-Else Activity - A conditional activity that allows branching based on specific criteria. Either enter or select values for Then and Else.	
x	Notification Activity - An activity that displays a notification window that contains an email template for the activity owner to complete, and then send an email notification.	
xi	SOP Activity - An activity that launches another standard operating procedure.	
xii	ICCC Platform should provide for authoring and invoking un-limited number of configurable and customizable standard operating procedures through graphical drag and drop design tool preferably using workflow engine	
xiii	ICCC platform should be able to pass the SOP step on to operator workstation for the user to respond based on his role and responsibility in the SOP to achieve faster response to the incidences or events.	
xiv	Flowchart based creation of SOPs in the web interface.	
xv	Situation Management by defining appropriate actions, messages, and acknowledgement for alerts & events from various devices.	
xvi	Define or customize rules(as per customer requirement) between different sensors and devices	
xvii	Command & Control Centre should be able to correlate two or more events coming from different subsystems (incoming sensors) based on time, place, custom attribute and provide correlation notifications to the operators based on predefined business and operational rules in the configurable and customizable rule engine.	
xviii	Load text, documents, images or other files or forms as instructions	
xix	Options to Forward alarms to other users in the system.	
xx	Incident Management Alarm reports including device status connect and disconnect Status reports.	
xxi	Actions taken as part of SOP should be logged in audit trail with date time stamp and operator comments	

xxi	Software/ application shall support on-demand or automatic outgoing call initiation.	
28	**Incident Management and Escalation Matrix**	
i	Any alarm or event can be made an incident either manually or automatic	
ii	Defining life cycle of incident from start to close. Assign incident to operators, field personnel.	
iii	Application should show the created incident in the Incident Register panel. Application Incident Register Panel should show the following details of the incident:	
	o Incident ID with GPS Coordinates	
	o Camera Location	
	o Type of Alert	
	o Alert Time	
	o Trigger option to initiate the SOP	
	o Status/ progress of the incident	
iv	The Software/ application shall be able to manually associate an incident to an asset and, vice versa, manually associate an asset to an existing incident.	
v	Define escalation matrix of incidents. For example In case of no response from operator, immediate SMS to higher Authorities or alert higher authorities if a device is not fixed within certain time limit.	
vi	Variety of Actions on events and incident: Minimum Actions Required: SMS, PHONE CALL, EMAIL, SOUND Alarm, PTZ movement, SNMP, Video PoP up, Mobile Phone Push Notifications.	
vii	Should support for sudden critical events and linkage to standard operating procedures automatically without human intervention.	
viii	Should support for multiple incidents with both segregated and/or overlapping management and response	
ix	Should provide facility to capture critical information such as location, name, status, time of the incident and be modifiable in real time by multiple authors with role associated permissions (read, write).	
x	Incidents should be captured in standard formats to facilitate incident correlation and reporting.	
xi	The system must identify and track status of critical infrastructure / resources and provide a status overview of facilities and systems	
xii	Should provide detailed reports and summary views to multiple users	
29	**Alarm Centre**	
i	Ability to pop-up cameras in alarm screen. A separate screen provided where cameras are opened dynamically based on priority of alarms.	

ii	Screen configurable to view alarms or 1 -40 cameras simultaneously.	
iii	Defining Instruction Message for operator and Acknowledgement for alarms	
iv	Alarm priority and alarm colour based on Severity	
v	Ability to run macros on an alarm	
vi	Ability to send SNMP messages on events	
30	**Central Control Features**	
i	Centralized as well as distributed architecture for Video and Alarm monitoring of Unlimited cameras and devices spread across multiple sites and places	
ii	Hierarchical and group view of all sites at centralized location.	
iii	Database backup/restore option.	
iv	Alerts in central station or individual sites according to rules.- Email, SMS, Phone call, Sound alert, Pop up	
v	Connection to Multiple monitors for Live(cameras, Fixed and PTZ), Alarm, GIS Map , Device status	
31	**User Rights**	
i	Create users based on rights and roles.	
ii	Options for configuring rights based on following grouping Administrator, Viewer, Security Guard/Field Personnel	
iii	GUI User Interface control, look & feel configurable according to user role.	
iv	Setting up and configuration of alerts by authorized user	
32	**Mobile Interface**	
i	Any user can login and open application from Mobile phones or ipads.	
ii	Alerts on Mobile phones in form SMS, MMS or push Notification	
iii	Ability to See Videos and Incident Snapshots on Mobile Interface.	
iv	Send Video, Audio and pictures from Mobile Phone to Command Centre	
v	Update Incident Details and reporting from Mobile Interface.	
33	**Reporting**	
i	Command & Control Centre should provide easy to use user interfaces for operators such as Click to Action, Charting, Hover and Pop Ups, KPIs, Event Filtering, Drill down capability, Event Capture and User Specific Setup	

ii	The solution should generate Customized reports based on the area, sensor type or periodic or any other customer reports as per choice of the administrators	
iii	Automatic and Manual reports generation of system status and export report in pdf, excel or html format.	
iv	Automatic logging of operator actions or response mechanism.	
v	The reports shall be designed/ developed in hierarchical manner.	
vi	User can be able to view reports from summary to particular incident/ event/ alert/ case details	
vii	Filter details based on location, name, brand and display on dashboard	
viii	Checking of incidents and health status	
ix	Encrypted communication between clients and servers.	
x	Automatic Report generation and email sending based on Configurable schedule of time, Day wise, Week wise and Month wise	
xi	The software/ application shall support searching through recorded video based on time, date, video source, image region and have the results displayed as both at panel and a series of thumbnail images.	
34	**Cyber-Security**	
	The Offered Integrated Command & Control Center (ICCC) Application should have an Application Security Audit Certificate from STQC for the ICCC Application as per the OWASP Guidelines to Mitigate Cyber Security Attacks. The Application must have already undergone Security Audit Certification/Auditing on or before the Bid Publishing Date. The Security Audit Certificate from STQC must be Submitted as a Documentary Evidence/Proof.	
35	**ICCC Software OEM Pre-Qualification Criteria**	
	The Intellectual Property Rights (IPR) of Offered Integrated Command & Control Center (ICCC) Application Platform must not reside in Country sharing Land Border with India. The Integrated Command & Control Center (ICCC) Application Platform Offered should not be Developed/manufactured by an entity in which the majority shareholding of the entity is from a Country sharing a Land Border with India.	

	OEM must provide with a Declaration about the Intellectual Property Rights (IPR) & Source Code Residence/Filing in the respective Country as a Documentary Evidence. The Integrated Command & Control Center (ICCC) Application Platform OEM whose Intellectual Property Rights (IPR) & Source Code residing in India shall be Preferable. The OEM who is Claiming to be Make in India OEM with Local Content greater than 50%, then their Intellectual Property Rights (IPR) & Source Code must Reside in India only. Documentary Evidence to be Provided.	
	The Integrated Command & Control Center (ICCC) Application Platform should have been Supplied in at least 3 Mission Critical Defense Projects in India. Purchase Order Copy to be Furnished along with the Bid Document to Substantiate the Proof.	
5	The VMS, Software OEM shall have a direct Registered Office in India without any Collaboration, Joint Venture, Distributor, Parent Company & should be in Operational for the Last 10 Years as on the Last Date of Bid Submission.	
6	The Intellectual Property Rights & Source Code of Offered Video Management Software (VMS) must not reside in a Country that is sharing Land Border with India. The Video Management Software (VMS) Offered should not be Developed/manufactured by an entity in which the majority shareholding of the entity is from a Country sharing a Land Border with India. OEM shall provide a Declaration about the intellectual property rights & Source Code as a Documentary Evidence & Copyrights Certificate. The OEM who is Claiming to be Make in India OEM with Local Content greater than 50%, then their Intellectual Property Rights (IPR) & Source Code must Reside in India only. Documentary Evidence to be Provided. Any False Declaration can lead to Bid Rejection.	
	Cyber Security Features	
1	The Offered Video Management Software (VMS) Application should have undergone Security Audit as per OWASP Guidelines & must Possess an Application Security Audit Certificate from CERT-IN Empaneled Auditors for the VMS Application as per the OWASP Guidelines to Mitigate Cyber Security Attacks. The Application must have already undergone Security Audit	

	Certification/Auditing on or before the Bid Publishing Date. The Security Audit Certificate must be Submitted as a Documentary Evidence/Proof.	
2	The Video Management Software should support RTSPS or SRTP or RTSP over TLS Encrypted Live Streaming from cameras (If Supported by Cameras) to VMS as well as support streaming of RTSPS or SRTP or RTSP over TLS Encrypted Live Streaming from VMS servers to clients.	

Annexure – D

Technical Specification of DG Set

Supply of 160 kVA D.G. Set with Exhaust After treatment and with Acoustic Enclosure along with Accessories.

1) DG Set

Cummins/……/……make Diesel Engine with Radiator Water Cooled, turbocharged with after cooler, suitable for prime duty Generating Set application, with an output of 160 kVA/128 KW under NTP conditions of BS:5514, with an overload capacity of 10% for one hour in every 12 hours of Operation.

The DG Set should be capable of voltage buildup within 15 to 20 seconds after receiving start command and it should be ready to take first step load within 15 to 20 seconds after receiving start command on voltage buildup

2) DIESEL ENGINE:

The Engine shall be complete with the following accessories:

- The total No. of Cylinders is 6 Nos In-line type.
- Engine cubic capacity should not be less than 6.7 L
- Electronic Engine with electronic fuel injection system
- Radiator with blower fan
- Corrosion inhibitor / liquid coolant
- Spin-on filters-fuel & lube oil
- Flywheel housing and flywheel to suit single bearing alternator
- Dry type and replaceable paper element air cleaner with restriction indicator
- Standard integral set-mounted radiator system, designed and tested for 50°C ambient temperature
- Optimized turbocharger for increase altitude capabilities
- Hospital Grade silencer mounted inside acoustic enclosure
- Stainless steel exhaust flexible bellows
- Electric starters with soft start engagement features
- Battery charging alternator
- Anti-vibration mounts of reputed make.
- Protective guards for all rotating parts.
- The engine should be Full Authority electronically controlled to meet compliance with stringent emission norms & improve overall performance efficiency and reliability

3) ALTERNATOR:

“STAMFORD”, or approved equivalent make standard design Alternator, suitably

rated at 160kVA/128kW at 0.8 PF, 415 Volts, 3 Phase, 4 wires, 50 cycles/sec., 1500 RPM, self-excited and self-regulated, with brushless excitation, Band of Voltage Regulation +/- 0.5% of rated voltage, from no load to full load, Insulation Class "H". The Alternator generally conforms to BS:5000/IS:4722.

- Brushless type, Screen protected, Revolving field, Self-excited alternator conforming to IS/IEC 60034-1
- Better motor starting capability
- Best in class efficiency
- Compact design with sealed bearings for longer life and lesser maintenance
- Impregnation on all wound components for better mechanical strength

4) EXHAUST AFTER TREATMENT SYSTEM:

Optimized design of exhaust after treatment system (EATS) to work in tandem with engine. The EATS and Engine should have **SINGLE** integrated controller to improve reliability of Engine and EATS. The EATS should be mounted in a separate compartment inside acoustic enclosure, to enable operator and technicians to have sufficient workspace around engine and alternator inside acoustic enclosure. The Diesel Exhaust Fluid tank (DEF tank) should be mounted in separate space inside acoustic enclosure to avoid corrosion effect on engine / alternator components. Exhaust After Treatment Systems should preferably manufactured by the engine manufacturer to ensure seamless integration, quality control & compliance with regulatory standards and reliability.

5) REMOTE MONITORING DEVICE:

A 4G compatible real time DG status monitoring device should be supplied as standard scope of supply along with DG set. The monitoring device should be capable of conveying necessary alerts to the operator for safe operation of Engine, Alternator and Exhaust After Treatment system. The remote monitoring device should have provision to monitor Fuel and DEF level to alert the customer suitably. The remote monitoring device should have a portal for the customer to login to monitor the DG set as per need.

6) INTEGRATED DG CONTROLLER:

- AMF Functionality
- SYNC compatible
- Audible & Visual warning for inducement
- Microprocessor based intuitive operator interface with LED backlit128X64 pixel graphic display with tactile feel soft switches.
- Indications - Generator set status
- Engine Metering: Oil pressure, Engine temperature, starting battery voltage, Engine running hours
- AC Alternator Metering: L-L Voltage and L-N Voltage, Current (phase and total), kVA (phase and total) and Frequency, kWh, Total & per phase (kw & kVA), PF, Utility Voltage and Freq.
- Engine Protection: Low lube oil pressure, High/Low coolant temperature, Battery Over/Under/Weak Volts, Fail to Crank/ Start, Sensor failure, Cranking lockout, Low fuel level.
- AC Alternator Protection: Over/Under Voltage, Over/Under Frequency, Loss of AC sensing. Overspeed, Over Current, kW overload
- Data Logging: Engine hours, Control hours and up to 5 recent fault codes
- Configurable glow plug control
- 12/24 Volt DC operation
- Sleep mode
- Modbus interface (RS485 RTU)
- Certifications - meets the requirement of relevant ISO, EN, Mil Std. and CE standards

- Maintenance due alarm based on Engine Run Time and due date
- Fuel and DEF level visual Display
- Exerciser scheduler
- The manufacturing of the integrated controller should rest with the engine manufacturer to guarantee optimal integration and for better reliability

7) **BASE FRAME**
Sturdy, fabricated, welded construction, Base Frame for mounting the above Engine and Alternator. Required number of anti-vibrations mounting pads, charged battery, battery stand, battery charger and leads etc.,

8) FUEL TANK

Min 385 Liters capacity sub-base Fuel Tank complete with level indicator, fuel inlet and outlet, air vent, drain plug and provision for fuel filling should be from outside acoustic enclosure with lock and key.

9) WARRANTY

The DG Set shall be guaranteed against faulty workmanship / poor material quality and against failures due to the same, for minimum of two years or 5000 Hours of operation whichever is earlier, from the date of commissioning. Apart from this warranty, Critical components of the engine viz Crank shaft, cam shaft, connecting rod, cylinder head and cylinder Block should carry warranty of 5 years from manufacturing date of engine or 5000 Hours of running whichever is earlier. No compromise will be entertained on this clause. The warranty letter should be given from manufacturer of the engine not by assemblers or OEMs and any other agency. Any progressive component damage due to manufacturing defect of 5 critical parts also covered within this warranty.

In order to ensure timely service backup, in case of emergency, it is very essential that manufacturer Service office is available closest to the site to ensure timely service, apart from their respective Service Dealers. The tenderer should submit the toll-free number details in India for the engine manufacturer to ensure speedy service support.

Non-compliance any of the above specs/requirements should be clearly mentioned in the tender, point by point.

Note: 1) The rate quoted shall be inclusive of all material, labours , transportation, loading & unloading etc., complete.

1) The rates quoted should Excluding GST.
2) This EOI is invited *only* to get the competitive rates for the items.

SUPPLIER/DEALER/BIDDER **Deputy General Manager-2**

BSWML